This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn): An isolated EER-7 protein having an amino acid sequence comprising at least 10 contiguous amino acids from the sequence depicted in SEQ ID NO:2 or which has at least 60% sequence similarity with SEQ ID NO:2, which EER-7 protein has (i) lysyl oxidase activity; (ii) comprises four copies of a SRCR domain having a sequence greater than 80% similar to a sequence selected from the group consisting of SEQ ID NOs: 3, 4, 5, and 6; and (iii) comprises a conserved catalytic domain of lysyl oxidase enzymes having a sequence as depicted in SEQ ID NO: 7.

2. (Withdrawn): The EER-7 protein of claim 1, wherein the protein has specific binding activity with an anti-EER-7 antibody.

3. (Withdrawn): The EER-7 protein of claim 1 which is a human EER-7 protein.

4. (Withdrawn): The EER-7 protein of claim 3 which has an amino acid sequence as depicted in SEQ ID NO: 2.

5. (Withdrawn): The EER-7 protein of claim 3 which is encoded by a nucleic acid having a sequence as depicted in SEQ ID NO: 1.

6. (Withdrawn): The EER-7 protein of claim 1 having at least 60% sequence identity to human EER-7 protein having an amino acid sequence as depicted in SEQ ID NO: 2.

7. (Withdrawn): A polypeptide fragment of an EER-7 protein, wherein the fragment has a property selected from the group consisting of:

a) comprising from one to four copies of a SRCR domain having a sequence greater than 80% similar to a sequence selected from the group consisting of SEQ ID Nos: 3, 4, 5, and 6;

b) a conserved catalytic domains of lysyl oxidase enzymes having a sequence as depicted in SEQ ID NO: 7;

c) specific binding activity with an anti-EER-7 antibody; and

d) any combination thereof.

8. (Previously Presented): An isolated nucleic acid encoding an endothelial estrogen regulated gene-7 protein having an amino acid sequence which has at least about 75% sequence similarity with SEQ ID NO:2, which endothelial estrogen regulated gene-7 protein has (i) lysyl oxidase activity; (ii) comprises four copies of a scavenger receptor cysteine rich domain having a sequence greater than 80% similar to a sequence selected from the group consisting of SEQ ID NOs: 3, 4, 5, and 6; and (iii) comprises a conserved catalytic domain of lysyl oxidase enzymes having a sequence as depicted in SEQ ID NO: 7.

9. (Original): The nucleic acid of claim 8 which is a cDNA.

10. (Previously Presented): The nucleic acid of claim 8, wherein the endothelial estrogen regulated gene-7 protein encoded for is a human endothelial estrogen regulated gene-7 protein.

11. (Previously Presented): The nucleic acid of claim 53, wherein the endothelial estrogen regulated gene-7 protein encoded for has an amino acid sequence as depicted in SEQ ID NO: 2.

12. (Previously Presented): The nucleic acid of claim 53 which comprises a nucleotide sequence as depicted in SEQ ID NO: 1.

13. (Previously Presented): A vector comprising a nucleic acid encoding a fragment of an endothelial estrogen regulated gene-7 protein operatively associated with an expression control sequence, wherein the fragment is selected from the group consisting of:

a) a polypeptide having at least about 75% sequence similarity with SEQ ID NO: 2,

b) a polypeptide comprising from one to four copies of a scavenger receptor cysteine rich domain, said scavenger receptor cysteine rich domain having a sequence greater than 80% similar to a sequence selected from the group consisting of SEQ ID NOs: 3, 4, 5, and 6;

c) a polypeptide comprising a conserved catalytic domain of lysyl oxidase enzymes

having a sequence as depicted in SEQ ID NO: 7; and

d) any combination thereof.

14. (Previously Presented): The vector according to claim 13, wherein the fragment of an endothelial estrogen regulated gene-7 protein is a full length endothelial estrogen regulated gene-7 protein.

15. (Original): A host cell transfected with the vector of claim 14.

16. (Withdrawn): A non-human animal transformed with the vector of claim 14, wherein the animal expresses an EER-7 protein at a detectable level in response to estrogen.

17. (Previously Presented): A method for producing endothelial estrogen regulated gene-7 protein, which method comprises isolating endothelial estrogen regulated gene-7 protein produced by the host cells of claim 15, wherein the host cells have been cultured under conditions that provide for expression of the endothelial estrogen regulated gene-7 protein by the vector.

18. (Currently Amended): An isolated ~~nucleic acid~~ oligonucleotide of no more than 100 nucleotides comprising at least 20 consecutive ~~bases~~ nucleotides of SEQ ID NO: 1, that ~~hybridize~~ hybridizes under stringent conditions with a nucleic acid having a nucleotide sequence as depicted in SEQ ID NO: 1, ~~but that do not hybridize under stringent conditions to~~

~~nucleic acids encoding other lysyl oxidases,~~ said stringent conditions including 50% formamide, 4XSSC at 42° C.

19. (Currently Amended): The ~~nucleic acid~~ oligonucleotide of claim 18, wherein at least ~~ten~~ 30 nucleotides are contiguous nucleotides ~~from the nucleic acid sequence as depicted in~~ of SEQ ID NO: 1.

20. (Currently Amended): The ~~nucleic acid~~ oligonucleotide of claim 18 which is detectably labeled.

21. (Withdrawn): An antibody that specifically binds to the EER-7 protein of claim 1.

22. (Withdrawn): A method for detecting an EER-7 protein, which method comprises detecting binding of the antibody of claim 21 to a molecule in a sample suspected of containing an EER-7 protein, wherein the antibody is contacted with the sample under conditions that permit specific binding with any EER-7 protein present in the sample and binding of the antibody to the molecule in the sample indicates the presence of EER-7.

23. (Withdrawn): A method for detecting expression of EER-7, which method comprises detecting mRNA encoding EER-7 in a sample from a cell suspected of expressing EER-7.

24. (Withdrawn): The method according to claim 23 wherein mRNA encoding EER-7 is

detected by hybridization to an EER-7-specific nucleic acid.

25. (Withdrawn): The method according to claim 24 wherein the EER-7-specific nucleic acid is at least 10 nucleotides in length and has a sequence identical to a sequence of the same number of bases in SEQ ID NO: 1, or the complementary sequence thereof.

26. (Withdrawn: Currently Amended): An assay system for identifying selective estrogen receptor ligands, comprising two different populations of transformed cells that express different functional estrogen receptors, wherein one population expresses the ERα estrogen receptor and the other population expresses the ERβ estrogen receptor and wherein the number of cells in each population is sufficient to transcribe a detectable amount of mRNA encoding EER-7.

27. (Withdrawn): The assay system of claim 26, wherein the estrogen receptor is a human estrogen receptor.

28. (Withdrawn): The assay system of claim 26 which is an endothelial cell.

29. (Withdrawn): The assay system of claim 28 which is a human umbilical vein cell.

30. (Withdrawn): A method for identifying a compound that selectively regulates EER-7

mRNA transcription through an estrogen receptor, which method comprises detecting a difference in the level of EER-7 mRNA in an assay system comprising transformed cells that express different functional estrogen receptors, wherein the number of cells is sufficient to transcribe a detectable amount of mRNA encoding EER-7 contacted with a test compound, wherein a difference in the level of EER-7 mRNA indicates that the test compound selectively regulates the estrogen receptor.

31. (Withdrawn): The method according to claim 30, wherein the test compound is an estrogen or an estrogen analog.

32. (Withdrawn): The method according to claim 31, wherein the test compound is an estrogen receptor selective agonist or antagonist.

33. (Withdrawn): The method according to claim 30, wherein the level of mRNA decreases when contacted with a test compound that regulates expression through the estrogen receptor.

34. (Withdrawn): The method according to claim 30, wherein the level of mRNA increases when contacted with a test compound that regulates expression through the estrogen receptor.

35. (Withdrawn): The method according to claim 30, wherein the estrogen receptor is a human estrogen receptor.

36. (Withdrawn): The method according to claim 30, wherein the first estrogen receptor is an ERα.

37. (Withdrawn): The method according to claim 36, wherein the second estrogen receptor is an ERβ.

38. (Withdrawn): The method according to claim 30, wherein the cell is an endothelial cell.

39. (Withdrawn): The method according to claim 38, wherein the cell is a human umbilical vein cell.

40. (Withdrawn): The polypeptide fragment of claim 7, wherein the four copies of SRCR domains comprise the sequences as depicted in SEQ ID NOS: 3-6.

41. (Withdrawn): The polypeptide fragment of claim 7, having at least 46% sequence similarity to the catalytic domain of lysyl oxidase enzyme having an amino acid sequence as depicted as SEQ ID NO: 7.

42. (Cancel)

43. (Cancel)

44. (Cancel)

45. (Withdrawn): A non-human EER-7 knockout animal, wherein endogenous EER-7 expression is suppressed in the animal.

46. (Withdrawn): A non-human animal transformed with a vector comprising a nucleic acid encoding a protein that regulates EER-7 expression, wherein the protein is operatively associated with an expression control sequence; wherein the animal expresses an EER-7 protein at a detectable level in response to estrogen.

47. (Previously Presented): The nucleic acid of claim 8, wherein the endothelial estrogen regulated gene-7 protein encoded for comprises four copies of a scavenger receptor cysteine rich domain having a sequence greater than 85% similar to a sequence selected from the group consisting of SEQ ID NOs: 3, 4, 5, and 6.

48. (Previously Presented): The nucleic acid of claim 8, wherein the endothelial estrogen regulated gene-7 protein encoded for comprises four copies of a scavenger receptor cysteine rich domain having a sequence greater than 90% similar to a sequence selected from the group consisting of SEQ ID NOs: 3, 4, 5, and 6.

49. (Previously Presented): The nucleic acid of claim 8, wherein the endothelial estrogen regulated gene-7 protein encoded for comprises four copies of a scavenger receptor cysteine rich domain having a sequence greater than 95% similar to a sequence selected from the group consisting of SEQ ID NOs: 3, 4, 5, and 6.

50. (Previously Presented): The nucleic acid of claim 8, wherein the endothelial estrogen regulated gene-7 protein encoded for comprises four copies of a scavenger receptor cysteine rich domain having a sequence selected from the group consisting of SEQ ID NOs: 3, 4, 5, and 6.

51. (Previously Presented): The nucleic acid of claim 8, wherein the endothelial estrogen regulated gene-7 protein encoded for has an amino acid sequence that has at least about 80% sequence similarity with SEQ ID NO: 2.

52. (Previously Presented): The nucleic acid of claim 8, wherein the endothelial estrogen regulated gene-7 protein encoded for has an amino acid sequence that has at least about 85% sequence similarity with SEQ ID NO: 2.

53. (Previously Presented): An isolated nucleic acid encoding an endothelial estrogen regulated gene-7 protein having an amino acid sequence which has at least about 90% sequence identity with SEQ ID NO: 2.

54. (Previously Presented): The isolated nucleic acid of claim 53, wherein the endothelial estrogen regulated gene-7 protein has an amino acid sequence that has at least about 95% sequence identity with SEQ ID NO: 2.

55. (Previously Presented): The vector of claim 13, wherein the fragment encoded for has specific binding activity with an anti-endothelial estrogen regulated gene-7 antibody.